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MYERS BIGEL SIBLEY & SAJOVEC			LY, CHEYNE D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/670,214	<b>Applicant(s)</b> BROWNING ET AL.	
	<b>Examiner</b> Cheyne D Ly	<b>Art Unit</b> 1631	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-16,26-39,48-61 and 87-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-16,26-39,48-61 and 87-101 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 2-16,26-39,48-61 and 87-101 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicants' arguments filed November 05, 2004 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.
2. Applicant's interview summary has been accepted.
3. The cancellation of claims 1, 17-25, 40-47, and 62-86 has been acknowledged.
4. Claims 2-16, 26-39, 48-61, and 87-101, TEDPHA, examined on the merits.

### **CLAIM REJECTIONS - 35 USC § 101**

5. Claims 2-16, 26-39, 48-61, and 87-101 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory algorithm type subject matter. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 2-16, 26-39, 48-61, and 87-101 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory algorithm type subject matter.
7. This rejection is maintained with respect to claims 2-16, 26-39, 48-61, and 87-101, as recited in the previous office action mailed July 09, 2004.

**RESPONSE TO ARGUMENTS**

8. On pages 12-14, Applicant argues that the claimed invention is directed to statutory subject matter. Applicant argues that “the test for statutory subject matter is not whether a ‘physical alteration’ take places.” Rather, the claimed invention as a whole must accomplish a practical application. Further, Applicant argues that claim 87 “clearly defines a practical application that produces a useful, concrete and tangible result.” Applicant’s arguments have been fully considered and found to be unpersuasive because claim 87 recites “steps that are performed in a data processing system.” Further, all the steps including the steps for generating and tracking a resolution plan are performed “in the data processing system.” One question comes to mind is what “useful, concrete and tangible result” has been produced by the claimed invention when all the steps and results (plan) are stored within a data processing system.

9. On page 14, Applicant cites the MPEP “2100-15 – 2100-17” to support that the claimed invention falls under one of the “safe harbors”. It is noted that the MPEP discusses “statutory process is one that requires the measurements of physical objects or activities to be transformed outside of the computer into computer data (In re Gelnovatch, 595 F.2d 32, 41 n.7, 201 USPQ 136, 145 n.7 (CCPA 1979) (data- gathering step did not measure physical phenomenon); Arrhythmia, 958 F.2d at 1056, 22 USPQ2d at 1036), where the data comprises signals corresponding to physical objects or activities external to the computer system, and where the process causes a physical transformation of the signals which are intangible representations of the physical objects or activities. Schrader, 22 F.3d at 294, 30 USPQ2d at 1459 citing with approval Arrhythmia, 958 F.2d at 1058-59, 22 USPQ2d at 1037-38; Abele,

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684 F.2d at 909, 214 USPQ at 688; In re Taner, 681 F.2d 787, 790, 214 USPQ 678, 681 (CCPA 1982).” It is re-iterated that the claimed invention does not fall under one of the safe harbors because the claim invention does recite any steps that cause “a physical transformation.” Further, the claimed invention does not produce a “useful, concrete and tangible result” as discussed above.

### **BASIS FOR REJECTION**

10. Claims 2-16, 26-39, 48-61, and 87-101 are rejected because said claims are directed to a method, data processing system, and computer program product comprising steps for analyzing data directed to PHA without any physical alteration step, which is considered to be non-statutory subject matter. “For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory. However, a claimed process for digitally filtering noise employing the mathematical algorithm is statutory.” (MPEP § 2106 (IV)(B)(2) (b), part ii). Similar to the nonstatutory example above, the instant invention comprises algorithmic steps for analyzing data directed to PHA without any physical alteration resulted from said analysis.

11. It is acknowledged that the instant invention comprises a data processing system, and computer program product with the means for analyzing data directed to PHA in said system. However, the means for analyzing data directed to PHA in a processing system do not cause a physical transformation as a result of the analysis outside of said system. “Such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process” (MPEP § 2106 (IV)(B)(2) (b), part ii).

### **CLAIM REJECTIONS - 35 USC § 103**

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 2-7, 10, 11, 15, 16, 26-32, 35, 36, 38, 39, 48-54, 57, 58, 60, 61, and 87-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrington (1996) in combination with Heinlein et al. (US 5,950,217 A).

15. This rejection is maintained with respect to claims 2-7, 10, 11, 15, 16, 26-32, 35, 36, 38, 39, 48-54, 57, 58, 60, 61, and 87-101, as recited in the previous office action mailed July 09, 2004.

### **RESPONSE TO ARGUMENTS**

16. On pages 15-16, Applicant argues that Herrington in combination with Heinlein et al. do not describe the limitations as recited in claim 87, lines 14-17, or the analogous recitations in

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claims 92 or 97. Applicant's argument has been fully considered and found to be unpersuasive. As previously cited, the employer completes a compilation of written process safety information before conducting any process hazard analysis (OSHA document 57:6356, page 4, lines 21-22), a report directed to an incident is generated; establish a system to promptly address and resolve the incident, resolutions; and corrective actions are documented (OSHA document 57:6356, page 11, (m) (4) and (5)). An emergency resolution plan is generated wherein a number of interim actions and the final action are listed (OSHA document 57:6356, page 26, lines 15-28). The resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed (OSHA document 57:6356, page 7, (5)).

17. On page 16, Applicant argues that Herrington in combination with Heinlein et al. do not describe the limitations as recited in claim 91, 96, or 101. Applicant specifically argues that "[t]here does not appear to be any description or suggestion in either of these references that the resolution plan may be completed by multiple departments or multiple sites."

Applicant's argument has been fully considered and found to be unpersuasive. It is noted that the limitations of "departments responsible for carrying out the resolution plan, sites at which the resolution plan will be carried out" are just two of the plurality of optional limitations recited in claim 91, 96, or 101. It is re-iterated that Heinlein et al. describes a system that is established to promptly address findings and recommendations, assure recommendations are documented and resolved, develop a written schedule for completing actions, communicate actions to operating, maintenance and other employees, and to perform and document the actions taken (column 2, lines 18-38). An apparatus is provided for inputs

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and retrieving the above documents from a database (Abstract etc.). The citation above sufficiently describes the optional limitation of “completed action items.”

#### **BASIS FOR REJECTION**

18. Heinlein et al. discloses a computer system and method for process safety with the object to prevent employee exposures to chemical hazards according OSHA developed process safety management standards (column 1, lines 61-66). The method of Heinlein et al. comprises information describing a plurality of chemical processes or study types such as operating procedures, process flows and hazard chemical used in the process into a data processing system wherein the data is stored and documented for performing PHA (column 3, lines 21-56). Heinlein et al. discloses a programmed means for retrieving (selecting) pre-loaded organizational unit descriptions that others have used to achieve compliance with the PSM standard (column 11, line 50, to column 12, line 3), as in instant claim 87, lines 8-10; claim 92, lines 5-8; and claim 97, lines 9-12.

19. Heinlein et al. discloses using a computer network to implement a project safety management (PSM) standard and a report comprising the consensus (resolution) of the PSM is generated (column 12, claims 3-4), as in instant claim 3; claim 87, lines 11-13; claim 92, lines 9-11, and claim 97, lines 13-15.

20. The method Heinlein et al. comprises set priorities and conducts analysis according to required schedules; performing a process hazard assessment (PHA); update and reevaluate (revalidation) PHAs at least every five years (column 2, lines 18-38), as in instant claims 28, 30, and 50-53.



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21. Further, a system is established to promptly address findings and recommendations, assure recommendations are documented and resolved, develop a written schedule for completing actions, communicate actions to operating, maintenance and other employees, and to perform and document the actions taken (column 2, lines 18-38), as in instant claims 5, 6, 29, and 31.

22. An apparatus is provided for inputs and retrieving the above documents from a database (Abstract etc.), as in instant claims 90, 91, 95, 96, 100, and 101.

23. However, Heinlein et al. does not disclose the limitation of TEDPHA, or selecting a chemical process and study type.

24. Herrington discloses a method for using the Tennessee Eastman Division Process Hazard Analysis (TEDPHA) for studying the Mechanical Integrity program in compliance with OSHA's PSM regulation (1910.119) (Herrington, page 110, column 1, lines 22-25) to ensure that process equipment containing and controlling highly hazardous chemicals is maintained to high standards which minimizes the chances of accidental release and subsequent injuries or accidents (Herrington, Abstract etc.; page 110, column 1, lines 7-11; column 2, lines 8-14), as in instant claims 2, 26, and 48.

25. Herrington discloses the company has been actively engaged in compliance efforts with OSHA regulations as cited in the OSHA document 57:6356 directed to 29 CFR 1910.119 (Herrington, page 110, column 1, line 24, and page 113, Citation No. 1). The inclusion of OSHA document 57:6356 is not being used as prior art but only to expand the OSHA regulations directed to 29 CFR 1910.119. OSHA document 57:6356 discloses a plurality of chemical processes, under the category of process safety management of highly hazardous

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chemicals, to be evaluated (OSHA document 57:6356, page 2, Process Safety Management of Highly Hazardous Chemicals §). OSHA document 57:6356 discloses the selection of one of a plurality of study types appropriate to evaluate the hazards of the process being analyzed (OSHA document 57:6356, page 3, § (2)), as in instant claims 87, 92, and 97.

26. OSHA document 57:6356 discloses many businesses develop custom checklist or what-if questions as part of their PHA to determine which PHAs to conduct first (OSHA document 57:6356, page 20, lines 23-28), as in instant claims 10, 11, 35, 36, 57, and 58.

27. The employer completes a compilation of written process safety information before conducting any process hazard analysis (OSHA document 57:6356, page 4, lines 21-22), a report directed to an incident is generated; establish a system to promptly address and resolve the incident, resolutions; and corrective actions are documented (OSHA document 57:6356, page 11, (m) (4) and (5)), as in instant claims 15, 16, 38, 39, 60, and 61.

28. An emergency resolution plan is generated wherein a number of interim actions and the final action are listed (OSHA document 57:6356, page 26, lines 15-28). The resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed (OSHA document 57:6356, page 7, (5)). A tracking system might include periodic status reports shared with affected levels of management, specific reports such as completion of an engineering study, and a final implementation report. This type of tracking system provides the employer with the status of the corrective action (OSHA document 57:6356, page 28, ¶ 6 to page 29, ¶ 1), as in instant claim 87, lines 14-20; claim 92, lines 12-17; claim 97, lines 16-21; and claims 88, 89, 93, 94, 98, and 99.

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29. The inclusion of OSHA document by Clark (September 29, 1993) is not used as prior art but only to disclose that PSM of Highly Hazardous Chemical standards, 29 CFR 1910.119 as defined by OSHA as directed to “worst-first” basis PHA, processes are divided into nodes according to their scheduled dates, and the most hazardous process is completed first (Clark, page 1, lines 2-17), as in instant claims 4, 7, 27, 32, 49, and 54.

30. Heinlein et al. discloses an improvement for reducing the risk of errors and time it would take for conducting a PHA (column 2, lines 60-67) under the OSHA PSM standard. The improvement of Heinlein et al. is directly applicable to the method of Herrington for using TEDPHA for studying the Mechanical Integrity program in compliance with OSHA’s PSM regulation (1910.119) (Herrington, page 110, column 1, lines 22-25).

31. An artisan of ordinary skill in the art at the time of the instant invention would have been motivated by the improvement disclosed by Heinlein et al. to reduce the risk of errors and time it would take for conducting a PHA by using the TEDPHA for being in compliance with OSHA’s PSM regulation (1910.119) as disclosed by Herrington. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to conduct a TEDPHA for being in compliance with OSHA’s PSM regulation (1910.119) as taught by Heinlein et al. and Herrington.

32. Claims 2-16, 26-39, 48-61, and 87-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrington (1996) in combination with Heinlein et al. (US 5,950,217 A) taken with Occupational Safety and Health Administration (61:56746-56856, November 04, 1996).

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33. This rejection is maintained with respect to claims 2-16, 26-39, 48-61, and 87-101, as recited in the previous office action mailed July 09, 2004.

34. Heinlein et al. and Herrington disclose the limitations to claims 2-7, 10, 11, 15, 16, 26-32, 35, 36, 38, 39, 48-54, 57, 58, 60, 61, and 87-101 as discussed above.

35. However, Heinlein et al. and Herrington do not disclose the limitations to claims 8, 9, 12-14, 33, 34, 37, 55, 56 and 59.

36. Occupational Safety and Health Administration (61:56746-56856, November 04, 1996) discloses a method of studying of employee exposure to a hazardous chemical such as 1,3-Butadiene by determining the risk of exposure (page 27, lines 21-22) and ranking the job in accordance with exposure, and develop a job-exposure matrix (page 28, lines 13-17) as in claims 8, 9, 12, 33, 34, 37, 55, 56 and 59.

37. Table V-16 (page 87) discloses a matrix citing consequent severity in terms of disease and likelihood of occurrences, as in instant claims 13 and 14.

38. Heinlein et al. discloses an improvement for reducing the risk of errors and time it would take for conducting a PHA (column 2, lines 60-67) under the OSHA PSM standard. The improvement of Heinlein et al. is directly applicable to the method of Herrington for using TEDPHA for studying the Mechanical Integrity program in compliance with OSHA's PSM regulation (1910.119) (Herrington, page 110, column 1, lines 22-25).

39. Occupational Safety and Health Administration (61:56746-56856) discloses the implementation of OSHA's PSM regulation (1910.119) as directed toward such chemical hazard as 1,3-Butadiene. One of ordinary skill in the art would have been motivated by the improvement disclosed by Heinlein et al. to improve the computer system for implementing

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OSHA's PSM regulation (1910.119) as taught by Herrington and Heinlein et al., and direct said improvement to the hazard chemical of 1,3-Butadiene as taught by Occupational Safety and Health Administration (61:56746-56856).

40. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method and computer system for being in compliance with OSHA's PSM regulation (1910.119), as taught by Herrington and Heinlein et al., as directed to 1,3-Butadine as taught by Occupational Safety and Health Administration (61:56746-56856).

### **CONCLUSION**

41. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

42. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

43. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547. The USPTO's official fax number is (571) 273-8300.

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44. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

45. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

46. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

47. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, Ph.D., can be reached on (571)272-0718.

C. Dune Ly  
1/25/05

  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER 1/31/05